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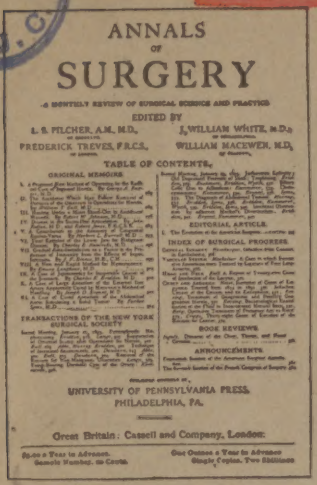

ANNALS
OF
SURGERY
A MONTHLY REVIEW OF SURGICAL SCIENCE AND PRACTICE
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UNIVERSITY OF PENNSYLVANIA PRESS.
PHILADELPHIA, PA.
Great Britain: Cassell and Company, London.
$5.00 a Year in Advance. Single Number, 50 Cents.
One Guinea a Year in Advance. Single Copies, Two Shillings.

OCTOBER, 1893

ON THE FEASIBILITY OF INTRAPERITONEAL CYSTOTOMY, WITH THE REPORT OF A CASE.

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ON THE FEASIBILITY OF INTRAPERITONEAL CYSTOTOMY, WITH THE REPORT OF A CASE.[1]

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THE interior of the bladder is ordinarily reached in one of three ways:

By the urethra;

By the perinæum in the male, and by the vagina in the female;

By the suprapubic incision.

All of these methods are imperfect, and give the surgeon only a limited view of the bladder. If we wish to demonstrate the bladder on the cadaver in the clearest possible manner, we do it by laparotomy.

If the bladder be distended, its superior surface presses against the anterior abdominal wall like the pregnant uterus.

In the Trendelenberg position, with an incision from the umbilicus to the pubes, we get a clear view of the unattached portions of the exterior of the bladder.

If, having thus opened the abdominal cavity, a median incision be made in the most prominent part of the bladder wall, extending backward from two to three inches, we are able by means of retractors to see the interior of the bladder very perfectly. The prostate, tumors and, if it be necessary, an entire section of the vesical wall can be removed with ease. The ureters can be seen and examined advantageously.

The superiority of the intraperitoneal over the suprapubic

[1] Read before the Obstetrical Society of Boston, June 10, 1893.

incision, as a means of reaching and operating upon the interior of the bladder, is very decided, and were there no question of safety to the patient, the former incision would always be used The suprapubic incision is necessarily of limited extent, and the bladder and abdominal walls are closely united being, in fact, a part of the same incision. The control of the bladder is imperfect, the thick abdominal walls obstructing both sight and manipulation.

Through the peritoneal incision the cut edges of the bladder can be drawn up toward the surface and even outside of the abdominal walls.

With the finger in the rectum, the prostate or any portion of the base of the bladder can be lifted to within an inch or two of the external opening. By repeated trials upon the cadaver, it has been found that the bladder may be sewed up intra-abdominally, so that it resists much distension, both by water and by air. The history of laparotomy is full of reports of accidental incision of the bladder, where suturing has been necessary. The reported results of these accidents are almost always favorable. The treatment of penetrating wounds and rupture of the bladder has been successful. The chief objection to intraperitoneal cystotomy must be the danger, or seeming danger, of septic infection. It is doubtful if the danger be as great as it has been supposed to be.

The stomach, the gall bladder and the intestines (all having septic contents) may be opened and closed with safety.

The uterus and the kidneys are removed through the peritoneal cavity because of the greater advantages of this route. Why then should the bladder not be approached by the route which affords the greatest facilities?

The opening of the abdominal cavity, the escape of the urine and the imperfect closure of the bladder after operation are dangers which present themselves to the operator's mind.

With proper care it is probable that the bladder can be as certainly shut off as the stomach or intestines. Normal urine is not septic as it enters the bladder. The danger from an alkaline urine in contact with healthy tissues for a short time is not great.

The flow of urine through the ureters is, as a rule, by drops, and can be easily taken care of by an assistant with sponges.

About the bladder a packing of gauze may be so placed that much urine might escape without soiling the peritonæum or intestines. Experimentally, it has been found that more than two ounces of permanganate of potash solution may be poured into such a packing at one point without staining through.

Intraperitoneal cystotomy may be performed for tumors of the bladder, for enlarged prostate, for disease of the ureters, for cases of stone in the bladder of great size and for sacculated stone.

It must be remembered that cystotomy of any kind is undertaken only in cases of great gravity. There are advantages in the operation which certainly, at times, render it preferable to suprapubic cystotomy. It should be remembered that the mortality of this latter operation is not small.

The writer makes the following suggestions for the performance of intraperitoneal cystotomy: Prepare the patient as for ordinary laparotomy; wash the bladder, if the urine be foul, for several days with a saturated solution of boric acid; distend the bladder gently with this solution at the time of operation; make the abdominal incision from the umbilicus to the pubes, being careful not to open the prevesical space.

The intestines should be drawn out of the pelvis and the cavity packed with strips of sterilized absorbent cotton covered with gauze, the patient being in the Trendelenberg position. An incision in the median line of the bladder, beginning an inch from the junction of the abdominal and vesical peritonæum, should be extended backward from two to three inches.

The incision should at first only include the peritoneal coat, which should be dissected from the muscular coat for a quarter of an inch on either side of the incision. The fluid should now be withdrawn and the incision carried through to the cavity of the bladder. Bleeding may be controlled by hæmostatic forceps.

Having performed whatever operation is necessary upon the interior of the bladder, and having the hæmorrhage under control the bladder may be closed. The method of closure should be by continuous suture of the muscular coat, the stitches being closely applied.

These stitches should not include the mucous membrane, They should be of silkworm-gut or of silk. The peritoneal coat of the bladder should then be closed by a continuous "right angle" or by "Lembert" suture.

This gives a double row of stitches. The continuous stitch prevents stretching of the bladder wall when it is distended, and is a safeguard against leakage. Should there exist a bleeding within the bladder, which threatens to interfere with micturition permanent drainage can be made through the perinæum, through the vagina or by the suprapubic route.

The intraperitoneal operation does not interfere with suprapubic drainage, should drainage be necessary. As a rule, however, drainage will not be necessary except that which can be obtained by the urethra.

The packing should now be removed from the pelvis and from about the intestines. The pelvic cavity should be wiped out with moist aseptic gauze and the abdominal wound closed. The bladder should be washed gently with boric acid solution two or three times a day, care being taken not to distend it nor to allow it to become distended with urine.

A Case of Intraperitoneal Cystotomy.—Mrs. B., twenty-eight years of age. Mother of five children.

For nine months the patient had been suffering from hæmorrhagic cystitis. It began without apparent cause, with the symptoms of blood in the urine and an increased desire to pass water. This condition grew gradually worse until the bladder would not hold its contents, night nor day, for more than twenty minutes. The urine became more and more mixed with blood and small bits of calculi. The suffering was constant and extreme.

The patient was blanched and very weak from loss of blood.

Under ether the urethra was dilated and the finger introduced into the bladder. It was contracted, the mucous surface being very irregular and covered with incrustations. The feeling was of new growths covered with urinary deposits. The bladder was very thoroughly curetted and large quantities of material were removed. The hæmorrhage was considerable.

Dr. Wm. F. Whitney reported, on microscopic examination, that only mucous membrane of the bladder and phosphatic deposits were found.

After the operation the bladder was washed twice a day with antiseptic solutions. There was a decrease in the amount of blood for a short time, but the hæmorrhage soon returned, notwithstanding the constant washing of the bladder. Four months later the condition of the patient was worse than before. She was admitted to the Massachusetts General Hospital, where, by the kindness of Dr. John Homans, she came under my care.

The urine was ammoniacal, contained much blood and was full of sediment. She suffered constantly, was miserable from loss of sleep and pallid from loss of blood. It seemed necessary to take some radical measures to relieve the distressing condition. Intraperitoneal cystotomy was decided upon and performed in the manner previously suggested. The operation afforded great freedom for manipulation.

The bladder wall was half an inch thick, but there was no troublesome bleeding. There was no difficulty in keeping the cavity free from urine.

The mucous membrane was studded with ulcerations and with grayish-white patches in which were firmly adherent urinary deposits. The entire surface of the bladder was curetted with a sharp curette. In places it was necessary to use the knife or scissors in order to reach healthy tissues.

It was thought best, as there was considerable oozing, to make an opening for free drainage into the vagina.

The muscular coat of the bladder was first closed then the peritoneal. When the packing in the pelvis was removed the peritonæum was found quite dry. The abdominal wound was closed in the usual manner. The bladder drained well through the vaginal opening and the urine soon became clear and abundant. After the operation the patient was troubled with nausea, and at one time had a very rapid and weak pulse, but otherwise made an excellent recovery. Four months after the operation the patient is in excellent condition and able to be about her housework.

The opening in the vagina has almost closed. The urine is free from blood.

Dr. Whitney's report is as follows: "The specimen consisted of blood clots and numerous small fragments, all but one of which consisted of masses of lime salts, incrusted on what seemed to be portions of the lining membrane of the bladder. One piece, larger than the rest, the inner surface of which was irregularly thickened and incrusted with lime salts, was composed of the muscular wall of the bladder largely infiltrated with round cells."